Amendments to the Claims

1. (Original) A computer-implemented method of performing generational garbage collection on a memory using a dynamic slidable window, the method comprising:

identifying a position in said memory at which a set of data expected to become garbage within a finite period of time is to be stored;

fixing a lower bound of a slidable window at said position, wherein said window is configured to identify a young generation within the memory;

allowing an upper bound of said window to dynamically expand while said lower bound is fixed; and

after the set of data becomes garbage:

un-fixing said lower bound; and

decreasing a size of said window.

2. (Original) The method of claim 1, further comprising, prior to said identifying:

receiving an alert from an entity configured to have knowledge of a nature of the set of data.

3. (Original) The method of claim 1, further comprising, prior to said identifying:

receiving notification that the set of data is to be stored in said memory.

4. (Original) The method of claim 3, wherein said identifying comprises:

identifying a location of an allocation point in said memory at the time said notification is received.

5. (Original) The method of claim 1, wherein the size of said window grows as said upper bound dynamically expands.

6. (Original) The method of claim 1, further comprising, after the set of data becomes garbage:

garbage-collecting the young generation.

7. (Original) The method of claim 1, further comprising, prior to said fixing:

garbage-collecting the young generation.

8. (Original) The method of claim 1, wherein said decreasing comprises:

setting the size of the window to a predetermined size.

9. (Original) The method of claim 1, wherein:

during allocation of said memory prior to said fixing:

said lower bound and said upper bound are configured to slide simultaneously; and

the window maintains an unchanging size; and

during allocation of said memory after said fixing:

said lower bound does not slide;

said upper bound expands; and

the window dynamically changes size.

10. (Original) A computer readable storage medium storing instructions that, when executed by a computer, cause the computer to perform a method of performing generational garbage collection on a memory using a dynamic slidable window, the method comprising:

identifying a position in said memory at which a set of data expected to become garbage within a finite period of time is to be stored;

fixing a lower bound of a slidable window at said position, wherein said window is configured to identify a young generation within the memory;

allowing an upper bound of said window to dynamically expand while said lower bound is fixed; and

after the set of data becomes garbage:

un-fixing said lower bound; and

decreasing a size of said window.

11. (Currently Amended) A method of generational garbage collection using a dynamic window, the method comprising:

in a generational garbage-collected memory, defining a young generation with a slidable window having a lower bound and an upper bound;

receiving a first notification regarding storage, in the memory, of data expected to become garbage in a relatively short period of time;

fixing said lower bound in a position; and

allowing said upper bound to expand while said lower bound is fixed in said position.

12. (Original) The method of claim 11, further comprising, after said allowing:

garbage-collecting the young generation; and

un-fixing said lower bound.

13. (Cancelled)

14. (Currently Amended) The method of claim 11 ~~13~~, further comprising, after said allowing:

receiving a second notification that said data have become garbage.

15. (Currently Amended) The method of claim 11 ~~13~~, further comprising, after said allowing:

observing the passage of a predetermined period of time.

16. (Original) The method of claim 11, wherein said allowing comprises:

incrementing said upper bound while said lower bound is fixed in said position.

17. (Currently Amended) The method of claim 11, wherein said fixing comprises:

identifying a position in the memory at which said ~~temporary~~ data are to be stored; and

setting said lower bound at the identified position.

18. (Currently Amended) The method of claim 11, wherein said fixing comprises:

identifying a position in the memory where said ~~temporary~~ data are stored; and

setting said lower bound at the identified position.

19. (Currently Amended) The method of claim 11, wherein said fixing comprises:

determining that said ~~a set of~~ data ~~that will become garbage in a relatively short period of time~~ will be stored in the memory;

wherein said position is the position at which said ~~the set of~~ data are or will be stored.

20. (Currently Amended) A computer readable storage medium storing instructions that, when executed by a computer, cause the computer to perform a method of generational garbage collection using a dynamic window, the method comprising:

in a generational garbage-collected memory, defining a young generation with a slidable window having a lower bound and an upper bound;

receiving a first notification regarding storage, in the memory, of data expected to become garbage in a relatively short period of time;

fixing said lower bound in a position; and

allowing said upper bound to expand while said lower bound is fixed in said position.

21. (Currently Amended) A computer readable storage medium containing a multi-generational data structure configured to be garbage-collected, the data structure comprising:

a young generation comprising data recently stored in the data structure, wherein said young generation is defined by a slidable window having:

a lower bound; and

an upper bound; and

an old generation comprising data that have survived one or more garbage collections of said young generation;

wherein during a normal phase of allocation of the data structure:

said lower bound and said upper bound slide simultaneously; and

said window maintains an unchanging size; and

wherein during a temporary phase of allocation of the data structure:

said lower bound is fixed in a set position;

said upper bound is dynamically expandable; and

said window changes size as said upper bound dynamically expands.

22. (Currently Amended) An apparatus for performing generational garbage collection, comprising:

a memory having an old generation and a young generation;

a slidable window for defining said young generation, said slidable window comprising:

a lower bound configured to be fixed in a selectable position during a temporary phase of allocation of the memory but slidable during a normal phase of allocation of the memory; and

an upper bound configured to slide during said temporary phase and said normal phase ~~after said lower bound is fixed~~;

a garbage collector configured to perform garbage collection on one or more of said old generation and said young generation; and

a memory allocator configured to:

allocate the memory in said [[a]] normal phase ~~manner~~ when said lower

bound and said upper bound slide simultaneously, thereby continuously defining a different portion of the memory as said young generation during said normal phase; and

allocate the memory in said [[a]] temporary phase ~~manner~~ when said lower bound is fixed, thereby continuously increasing the size of the young generation defined by said slidable window during said temporary phase.

23. (Currently Amended) The apparatus of claim 22, wherein:

said slidable window maintains an unchanging size while said memory allocator allocates memory in said normal phase ~~manner~~; and

said slidable window expands in size while said memory allocator allocates memory in said temporary phase ~~manner~~.

24. (Currently Amended) The apparatus of claim 22, wherein said apparatus is configured to fix said lower bound and allocate memory in said temporary phase ~~manner~~ when a set of data stored in said memory is expected to become garbage within a finite period of time.

25. (Currently Amended) The apparatus of claim 24, wherein said apparatus is configured to un-fix said lower bound and allocate memory in said normal phase ~~manner~~ after said set of data becomes garbage.

26. (Original) The apparatus of claim 24, wherein said selectable position is a position at which the set of data is stored.

27. (Original) The apparatus of claim 24, wherein said selectable position is a position at which the set of data will be stored.

28. (Original) An electronic device, comprising:

a processor;

a garbage-collectable memory having:

an old generation of memory; and

a young generation of memory defined by a slidable window having a lower bound and an upper bound;

a garbage collector for controlling garbage-collection of said memory;

executable code configured to:

alert said garbage collector a first time when data to be stored in said memory are expected to become garbage in a relatively short period of time; and

alert said garbage collector a second time when said data have become garbage;

wherein, in response to said first alert, said lower bound is fixed in a position and said upper bound is allowed to expand; and

wherein, in response to said second alert, said lower bound is un-fixed.

29. (Original) The electronic device of claim 28, wherein, in response to said second alert, said upper bound is retracted to return said slidable window to its size prior to said first alert.

30. (Original) The electronic device of claim 28, wherein, in response to said second alert, said garbage collector garbage-collects said young generation.

31. (Original) The electronic device of claim 28, wherein said electronic device is a telephone.

32. (Original) The electronic device of claim 28, wherein said electronic device is a computer.

33. (Original) The electronic device of claim 28, wherein said executable code comprises a Java Virtual Machine.

34. (Original) The electronic device of claim 28, wherein said executable code comprises a compiler.